

APPLICATION FOR FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED April 28, 2000 3. DATE RECEIVED BY STATE 4. DATE RECEIVED BY FEDERAL AGENCY Applicant Identifier State Application Identifier Federal Identifier <div style="font-size: 1.5em; font-family: cursive;">C9-98959801-0</div>															
5. APPLICANT INFORMATION Legal Name: Washoe Tribe of Nevada and California Address (give city, county, state, and zip code): 919 Highway 395 South Gardnerville, NV 89410 Organizational Unit: Environmental Protection Program Name and telephone number of the person to be contacted on matters involving this application (give area code): A. Brian Wallace (775) 265-4191																	
6. EMPLOYER IDENTIFICATION (EIN): <div style="border: 1px solid black; padding: 5px; display: inline-block;"> 8 8 - 0 1 2 0 7 5 4 </div>		7. TYPE OF APPLICANT: (enter appropriate letter here) <u>K</u> A. State H. Independent School District B. County I. State Controlled Institution of Higher Learning C. Municipal J. Private University D. Township K. Indian Tribe E. Interstate L. Individual F. Intermunicipal M. Profit Organization G. Special District N. Other (Specify) _____															
8. TYPE OF APPLICATION: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other Specify: _____		9. NAME OF FEDERAL AGENCY: U.S. Environmental Protection Program															
10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="border: 1px solid black; padding: 5px; display: inline-block;"> 6 6 - 4 6 0 </div> TITLE: Non Point Source Program		11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Non Point Source Program; to expand the Tribal Program to protect and restore water quality, watershed condition and aquatic and riparian habitat on Tribal lands as outlined in the Tribes NPS management program.															
12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.): Washoe Tribal Reservation and Trust Lands		13. PROPOSED PROJECT: <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Start Date</td> <td style="width:50%;">End Date</td> </tr> <tr> <td>07/01/00</td> <td>06/30/00</td> </tr> </table>		Start Date	End Date	07/01/00	06/30/00										
Start Date	End Date																
07/01/00	06/30/00																
14. CONGRESSIONAL DISTRICT OF: a. Applicant: NV: 2 Gibbons CA: 14 Doolittle b. Project: Same		15. Estimated Funding: \$224,808.00 <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">a. Federal</td> <td style="width:50%;">\$ 179,999.00</td> </tr> <tr> <td>b. Applicant</td> <td>\$ 38,409.00</td> </tr> <tr> <td>c. State</td> <td>\$</td> </tr> <tr> <td>d. Local</td> <td>\$ 6,400.00</td> </tr> <tr> <td>e. Other</td> <td>\$</td> </tr> <tr> <td>f. Program Income</td> <td>\$</td> </tr> <tr> <td>g. TOTAL</td> <td>\$ 224,808.00 ✓</td> </tr> </table>		a. Federal	\$ 179,999.00	b. Applicant	\$ 38,409.00	c. State	\$	d. Local	\$ 6,400.00	e. Other	\$	f. Program Income	\$	g. TOTAL	\$ 224,808.00 ✓
a. Federal	\$ 179,999.00																
b. Applicant	\$ 38,409.00																
c. State	\$																
d. Local	\$ 6,400.00																
e. Other	\$																
f. Program Income	\$																
g. TOTAL	\$ 224,808.00 ✓																
16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS? a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESSES FOR REVIEW ON: _____ DATE _____ b. NO <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW																	
17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> YES If "Yes" attach an explanation. <input checked="" type="checkbox"/> NO																	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.																	
Typed Name of Authorized Representative: A. Brian Wallace		b. Title: Chairman															
d. Signature of Authorized Representative		c. Telephone Number (775) 265-4191 e. Date Signed <div style="text-align: center; font-weight: bold;">RECEIVED</div> <div style="text-align: center; font-size: 1.2em;">APR 28 2000</div>															

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Non Point Source	66 - 460	\$	\$	\$	\$	\$
2.						
3.						
4.						
5. TOTALS		\$	\$	\$	\$	\$

SECTION B - BUDGET CATEGORIES

6. OBJECT CLASS CATEGORIES	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Program A	(2) Program B	(3)	(4)	
a. Personnel	\$ 18,418.00	\$ 25,662.00	\$	\$	\$ 44,080.00
b. Fringe Benefits	2,295.00	10,224.00			12,519.00
c. Travel	1,200.00	1,250.00			2,450.00
d. Equipment	0	50,000.00			50,000.00
e. Supplies	2,200.00	1,021.00			3,221.00
f. Contractual	1,162.00	26,000.00			27,162.00
g. Construction	0	0			0
h. Other	0	19,900.00			19,900.00
i. Total Direct Charges (sum of 6a-h)	25,354.00	134,057.00			159,411.00
j. Indirect Charges	4,645.00	15,943.00			20,588.00
k. TOTALS (sum of 6i and 6j)	\$ 29,999.00	\$ 150,000.00	\$	\$	\$179,999.00
7. Program Income	\$	\$	\$	\$	\$ 0

Previous Edition Usable

Authorized for Local Reproduction

Standard Form 424A (Rev. 7-97)
Prescribed by OMB Circular A-102

SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8. Non Point Source	\$ 38,409.00	\$	\$ 6,400.00	\$ 44,809.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8 and 11)	\$	\$	\$	\$

SECTION D - FORECASTED CASH NEEDS

13. Federal	(Total for 1st Year)	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
	\$ 179,999.00	\$ 35,000.00	\$ 50,000.00	\$ 75,000.00	\$ 19,999.00
14. Non-Federal	44,809.00	5,083.00	9,600.00	25,000.00	5,126.00
15. TOTAL (sum of lines 13 and 14)	\$ 224,808.00	\$ 40,083.00	\$ 59,600.00	\$ 100,000.00	\$ 25,125.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16.	\$	\$	\$	\$
17.				
18.				
19.				
20. TOTALS (sum of lines 16 - 19)	\$	\$	\$	\$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges: \$159,411.00	22. Indirect Charges: \$20,588.00
23. Remarks: The Washoe Tribe would like to implement projects as outlined in the Non Point Source Assessment and Management Program.	

KEY CONTACTS

AGENCY/ORGANIZATION DIRECTOR

(Individual who is authorized to sign the assistance agreement application and award acceptance.)

NAME: A. Brian Wallace
TITLE: Chairman
ADDRESS: 919 Highway 395 South
Gardnerville, Nevada 89410
TELEPHONE: 775) 265-4191 ext 104 EMAIL: washoetribe@saturnnet.com

PROGRAM/PROJECT DIRECTOR

(Technical program director or person responsible for the project as a contact person in Block #5 of the application.)

NAME: Timothy Carr Seward
TITLE: Program Director
ADDRESS: 919 Highway 395 South
Gardnerville, Nevada 89410
TELEPHONE: 775) 265-4191 x 114 EMAIL: washoetribe@saturnnet.com

FINANCE DIRECTOR

(Individual responsible for maintaining the accounting and financial management system supporting expenditures, preparing the financial reports, etc.)

NAME: Kenneth Walters
TITLE: Finance Officer
ADDRESS: Washoe Tribe of Nevada and California
919 Highway 395 South Gardnerville, Nevada 89410
TELEPHONE: 775) 265-4191 x113 EMAIL: washoetribe@saturnnet.com

ASSURANCES - NON-CONSTRUCTION PROGRAMS

OMB Approval No 0348-0040

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

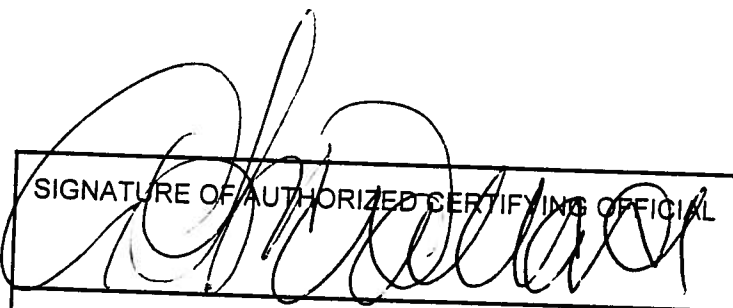
1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of the project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§ 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 795), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply with the provision of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§ 276a-7), the Copeland Act (40 U.S.C. §§ 874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally assisted construction subagreements.

Previous Edition Usable

AUTHORIZED FOR LOCAL REPRODUCTION

Standard Form 424B (7-97)
Prescribed by OMB Circular A-102

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplain in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.)
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§ 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

 SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE Chairman
APPLICANT ORGANIZATION Washoe Tribe of Nevada and California 919 Highway 395 South, Gardnerville, NV	DATE SUBMITTED April 28, 2000

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

A. Brian Wallace, Chairman

TYPED NAME & TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE OF AUTHORIZED REPRESENTATIVE

DATE

4/27/11

____ I am unable to certify to the above statements. My explanation is attached.


Approved by OMB
0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input checked="" type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input checked="" type="checkbox"/> b. material change For material Change Only: year _____ quarter _____ date of last report _____
--	--	---


<p>4. Name and Address of Reporting Entity:</p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <input checked="checked" type="checkbox"/> Prime </div> <div style="text-align: center;"> <input type="checkbox"/> Subawardee </div> </div> <p style="margin-left: 200px;">Tier _____, <i>if known.</i></p> <p>Washoe Tribe of Nevada and California 919 Highway 395 South Gardnerville, Nevada 89410</p> <p style="margin-left: 150px;">NV: 2 Gibbons CA: 14 Doolittle</p> <p>Congressional District, <i>if known:</i></p>	<p>5. If Reporting Entity in No. 4 is Subawardee, enter Name and Address of Prime:</p> <p style="text-align: center; margin-top: 40px;">Same</p> <p>Congressional District, <i>if known:</i> Same</p>
--	--

<p>6. Federal Department/Agency:</p> <p>US Environmental Protection Agency</p>	<p>7. Federal Program Name/Description:</p> <p>Non Point Source Grant CFDA Number, if applicable: _____</p>
---	--

8. Federal Action Number, <i>if known</i> :	9. Award Amount, <i>if known</i> : \$
---	--

<p>10. a. Name and Address of Lobbying Registrant <i>(If individual, last name, first name, MI):</i></p>	<p>b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i></p> 
--	---

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Signature: 

Print Name: A. Brian Wallace

Title: Chairman

Telephone No.: (775) 265-4191 Date: 4/28/00

Authorized for Local Reproduction
Standard Form LLL (Rev. 7-97)

U.S. Environmental Protection Agency

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

A. Brian Wallace, Chairman

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

____ I am unable to certify to the above statements. My explanation is attached.

QUALITY ASSURANCE PLAN

X

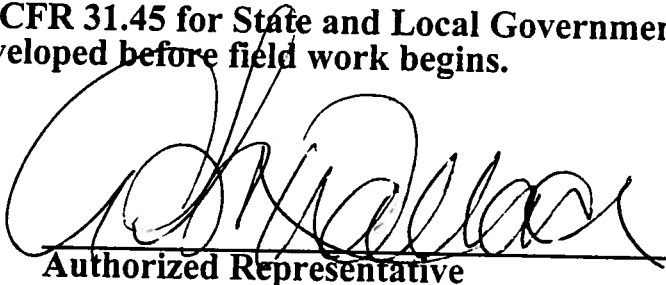
This program/project does not involve environmentally related measurements or data generation; therefore, a Quality Assurance Plan is not required pursuant to the above referenced assistance regulations.

This program/project involves environmentally related measurements or data generation; therefore a Quality Assurance Plan which meets the requirements of:

X

40 CFR 30.54 for Universities and Non-Profit Organizations is attached or will be developed before field work begins; or,

40 CFR 31.45 for State and Local Governments is attached or will be developed before field work begins.



Authorized Representative

April 28, 2000

Date

List of Exhibits

Exhibit A:

Tribal Attorney Statement of Tribal Legal Authority.

Constitution and Bylaws of the Washoe Tribe of Nevada and California.

Amended Constitution and Bylaws of the Washoe Tribe of Nevada and California.

Title 19-Water Code.

Title 17-Environmental Protection Code.

Federal Register/ Vol. 63, No. 250/Wednesday, Dec. 30, 1998/Notices.

Indian Environmental General Assistance Program proposal FY99.

Resolution of the Governing Body of the Washoe Tribe of Nevada and California to apply for NPS grant.

319 (h) Tribal Nonpoint Source Grant Application Waiver Request to 10% Match.

Exhibit B: Draft Washoe Tribe of Nevada and California Nonpoint Source Assessment and Management Program.

Exhibit C: University of Nevada at Reno: Letter from Dean Adams and Nonpoint Source Projects Proposal (319h) and resumes.

Washoe Tribe of Nevada and California



April 26, 2000

Ms. Melinda Taplin
Grants Management Office, PMD-7
Policy and Management Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Taplin,

Enclosed you will find the complete grant application of the Washoe Tribe of Nevada and California's request for federal assistance under section 319 of the Clean Water Act, Program A and B.

We look forward to working in partnership with EPA to protect and restore water quality, watershed condition, and riparian habitat on tribal lands. Please feel free to call Tim Seward, Environmental Director or Marie Barry, Environmental Specialist II, if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Wallace", is written over a large, stylized circular flourish.

A. Brian Wallace, Chairman

Enclosures: SF424 A/B, Key Contacts, Certification Regarding Debarment, Suspension and Other Responsibility Matters, QAP, Certification Regarding Lobbying, Disclosure of Lobbying Activities, Attachments, and Maps.

cc: Rene Chan: Grant Specialist
Kristin Gullatt: Project Officer
Washoe Grants Office
WEPD file/NPS FY00

RECEIVED

APR 23 2000

GMO, PMD-7

Table of Contents

Cover letter from Tribal Chairman.....	1.
Proposal Program A.....	1 - 4.
Workplan Program A.....	1 - 3.
Proposal Program B.....	1 - 6.
Workplan Program B.....	1 - 4.
Map 1 (Stewart Property Boundary).....	1.
Map 2 (Proposed fence line with streambank planting areas).....	1.
Attachments	1.
1. Tribal Resolution for NPS funding	
2. Letters of support	
3. University of Nevada at Reno proposed monitoring letter	
4. Sunelco quote for watering devices	
5. BMP 3-2 Wattling (3-5 - 3-8)	
6. BMP 3-3 Brush Layering (3-9)	
7. BMP 4-3 Rock Riprap (4-8)	
8. Appendix G-6 Fencing - Guidelines (G-26 - G- 27)	
9. Design of Stone spur (1-3)	
Attachments.....	2.
1. Application for Federal Assistance (SF 424)	
2. Budget Information (SF 424A)	
3. Key Contacts	
4. Assurances - Non - Contraction Programs	
5. Certification Regarding Lobbying	
6. Disclosure of Lobbying Activities	
7. EPA Certification Regarding Debarment, Suspension and Other Responsibility Matters	
8. Quality Assurance Plan Form	
9. Copy of List of Exhibits sent to EPA November 5, 1999	

Applicant Name and Address

Washoe Tribe of Nevada and California
919 Highway 395 South
Gardnerville, NV 89410

Contact Person

Tim Seward, Environmental Programs Director or
Marie Barry, Environmental Specialist II
(775) 265-4191
FAX: (775) 265-6240
Email: washoetribe@saturnnet.com

Project Introduction/Identification of the Problem

The Washoe Tribe has a long commitment to the restoration of Tribal lands and the aboriginal homelands. The Washoe Tribe has established several laws and plans to protect the environment of Tribal lands, including a Planning Development law, Water Code, Environmental Protection Code, and Land Use Management Plan. In the past year, the Washoe Environmental Department in the last year has completed a final draft on Nonpoint Source Assessment and Management Program, Water Quality Standards (Draft) and a Sampling and Analysis Plan for the Water Quality Monitoring Program (Draft). The Tribe has initiated many specific environmental restoration and protection projects to implement these plans and help minimize the impacts of a long term ranching operation and to improve water quality. An emphasis has been placed on protection of the Carson River Watershed environment where the Tribe has joined forces with federal, state, and local governments on water quality, air quality, bank stabilization projects. Additionally, the Tribe has worked with Tribal elders and the children on the restoration and recording of the knowledge base of traditional and customary stewardship and practices and worked with federal, state, local, and private parties to ensure the protection of traditional Washoe natural resources, including gathering areas and native vegetation.

The Tribe's environmental restoration efforts and consultation with the Upper Carson River Management Group have highlighted the need for 319(h) funding to address a significant stream bank erosion problem located on Tribal lands, which impacts the health of the entire watershed. Watershed will continue through these existing efforts, however, this 319 (h) grant funding is needed to implement By reducing sediment loading, restoring native vegetation, and implementing new irrigation practices, the measures proposed in this project will stride towards restoring water quality, watershed condition, and aquatic and riparian habitat as outlined in the Washoe Tribe of Nevada & California's Nonpoint Source Assessment and Management Program. The Carson River Watershed (CRW) is on the Nevada 303d list for exceeding impairments of phosphorus, sediment, and turbidity. The CRW is one of the EPA's targeted hydrologic unit areas, and is one of the 12 targeted areas on the National Clean Water Action Plan for coordinated restoration demonstration watersheds.

The project will implement three agriculture activities identified under the Tribe's best management practices implementation schedule as set forth in the Tribe's final NPS Management Program. This will include the development of a Planned Grazing System (BMP 7-8), Proper Grazing Uses (BMP 7-9), and implementation of new livestock facilities (BMP 7-11) (solar irrigation system) proposed for installation in the Tribe's 319 (h) proposal for FY 2000 – 2001. Specifically, the Washoe Environmental Protection Department (WEPD) will partner with the Washoe Development Enterprise (WDE), which operates the Washoe Tribal Ranch to review the current situation and develop an appropriate Grazing System and Grazing Uses for the ranch lands, located along the Carson River see the attached maps for a description of the lands (Exhibit B). Additionally, we will develop an implementation plan to utilize new solar irrigation system which we plan to install under a 319(h) grant. The Ranch Manager and WEPD staff will develop these plans and review them with WDE management and the WDE Board and the Tribal Council. We will also consult with local, state, federal (Washoe Development Enterprise (WDE), USDA Natural Resource Conservation Service, Western Nevada Resource Conservation Council (WNRC&D), Carson Valley Conservation District, Upper Carson River Management Group) to utilize their technical capacity and expertise. The Washoe Tribe will be the lead organization with the above listed named as cooperating institution and agencies (Exhibit D). It is anticipated that the projects implementation will result in improved water quality and fish and vegetation habitat.

Project Goals & Objectives

Program goal: To reduce nutrient and bacterial contamination in the Carson River Watershed and tributaries as outlined in the Tribe's NPA Management Program and the Handbook of Best Management Practices adopted by the State, the Conservation Commission and the Division of Conservation Districts. By working with above listed agencies and organizations, the Tribe intends to establish BMP ranch operation grazing models for the entire Carson River Watershed.

Program objectives:

- 1) Identification of problems resulting from WDE's current grazing practices.
- 2) Review of other grazing systems which are compliant with the BMPs and consultation with NRCS and other organizations.
- 3) Development of Planned Grazing System, according to BMP 7-8, for the Washoe Ranch operation and review of this System by WDE management and Board, and the Tribal Council.
- 4) Implementation of Proper Grazing Uses according to BMP 7-9 and implementation of new Livestock Facilities such as solar irrigation devices.
- 5) Improve water quality through the reduction of nutrient and bacterial contamination.
- 7) Protection of important fish habitats and native riparian vegetation.

Outputs/Deliverables

- Task 1: **1 months from start**
Assign tasks to personnel and identify any possible modifications needed in work-plan. Outline management plan objectives. Establish a work schedule for WED staff and the WDE Ranch Manager.
- Output 1: List of assigned personnel with responsibilities. Schedule of activities.
-
- Task 2: **3 months from start**
Review the current grazing practices and identify environmental issues arising from these practices.
- Output 2: Outline of the current grazing practices and areas where change is needed to reduce nutrient and bacterial contamination.
-
- Task 3: **5 months from start**
Review of other Planned Grazing Systems which are compliant with the BMPs and consultation with NRCS and other organizations regarding Grazing Systems. Development of the Washoe Planned Grazing System, according to BMP 7-8.
- Output 3: Development of a draft Washoe Planned Grazing System.
-
- Task 4: **6 months from start**
Review the draft Washoe Planned Grazing System with WDE management, the WDE Board, the Tribal Council, and cooperating technical experts. Revise the System as necessary.
- Output 4: Final Washoe Planned Grazing System. Quarterly reports.
-
- Task 5: **On-going**
Implementation of water testing of nutrients and bacteria to measure the success of the implementation of the BMPs.
- Output 5: Water quality testing results.
-
- Task 6: **Month 7 through 12 from start**
Implementation of Proper Grazing Uses according to BMP 7-9 and the Washoe Planned Grazing System. Also implementation of new Livestock Facilities including a solar irrigation system.
- Output 5: Schedule of implementation of practices.
-
- Task 6: Final draft report detailing the success of the projects/activities and identify future BMP projects.
- Output 6: Final draft report presented to the Washoe Tribal Council and EPA.

BUDGET

LINE ITEM	CALCULATION	EPA REQUEST	INKIND MATCH
Personnel			
Environmental Department Director	Range 35, Step A: (\$28.31/hour) x 80	2,265	
Environmental Specialist III	(\$16.35/hour) x 200	3,270	
1 FTE Environmental Specialist II	Range 19, Step E (14.14/hour) x 665	9,339	
Environmental Specialist I	Range , Step (\$12.83/hour) x 200	2,566	
Secretary	\$11.50/hour x 85	978	
WDE Director	\$33/hr x 16		528
WDE Asst. Coordinator	\$28/hr x 32		896
WDE Ranch Manager	\$12.18/hr x 125		1,603
Subtotal		18,418	3,027
Personnel			
Fringe Benefits			
FICA	0.0765	1,409	232
FUTA	0.008	147	24
SUTA	0.018	332	54
SIIS	0.0221	407	67
Subtotal Fringe Benefits		2,295	377
Subtotal Personnel & Fringe		20,712	3,404
Travel			
Travel (local)	4,000 miles x \$.32	1,280	
Subtotal Travel		1,280	
Contractual			
Water/Sediment Testing University of Nevada, Reno	7.75 hours @ \$150/hour	1,162	
Subtotal Contractual		1,162	
Supplies			
Office Supplies	general office supplies and computer supplies	1,200	
Field Supplies		1,000	
Subtotal supplies		2,200	
Total Direct Costs		25,354	3,404
Indirect costs @ 19.2% minus contractual and equipment		4,645	654
Total Project		29,999	4,058
Costs			

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM A
FY 2000 -WORKPLAN**

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)		ESTIMATED COST	DATE	
						START	END
1. Administrative Duties							
A. Assign tasks to personnel and identify any possible modifications needed in workplan.		List of assigned personnel with responsibilities.	PD	40 hours	1,132	A. 7/1/00	8/1/00
			ESIII	35 hours	572	B. 7/1/00	8/1/00
			ESII	100 hours	1,414	C. 7/1/00	6/30/01
B. Outline management plan objectives. Establish a work schedule for WEPD staff and WDE ranch manager.		Schedule of activities.	ESI	20 hours	257	D. 9/1/00	6/30/01
			S	60 hours	690	E. TBA	
			RM	5 hours	64		
C. Draft Quarterly/Annual reports		EPA NPS proposal FY01.					
D. Report to Tribal Council and WDE Board.							
E. Draft proposal for further NPS funding.							
2. Evaluate Current Grazing Practices							
A. Review the current grazing practices and identify environmental issues arising from current practices.		Outline of current practices and areas where possible changes are needed to reduce nutrient and bacterial contamination.	ESIII	40 hours	1,132	7/1/00	10/31/00
			ESII	135 hours	1,909		
			ESI	80 hours	1,026		
B. Coordinate with WDE Ranch Manager.			RM	70 hours	898		

WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM A
FY 2000 -WORKPLAN

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)		ESTIMATED COST	DATE	
						START	END
3. Develop Planned Grazing System							
A. Review of other Planned Grazing Systems which are compliant with BMPs in consultation with NRCS and other organizations regarding Grazing Systems.		Draft Washoe Planned Grazing System.	PD	5 hours	142	7/1/00	1/1/01
			ESIII	40 hours	654		
			ESII	145 hours	2,050		
			ESI	30 hours	385		
			RM	5 hours	64		
B. Develop the Washoe Planned Grazing System, according to BMP 7-8.							
4. Review and Finalize Planned Grazing System							
A. Review the draft Washoe Planned Grazing System with WDE Ranch Management, WDE Board, Tribal Council, and Cooperating technical experts.		Final Washoe Planned Grazing System.	PD	10 hours	283	7/1/00	2/1/01
			ESIII	25 hours	409		
			ESII	100 hours	1,414		
			ESI	30 hours	385		
			RM	10 hours	128		
			WDED	16 hours	528		
			WDEC	32 hours	896		
B. Revise the System as necessary.							
5. Implementation							
A. Implement Proper Grazing Uses according to BMP 7-9 and the Washoe Planned Grazing System.		Schedule of implementation of practices.	PD	5 hours	142	2/1/01	6/30/01
			ESIII	40 hours	654		
			ESII	100 hours	1,414		
			ESI	40 hours	513		
			RM	40 hours	513		
B. Installation of livestock solar irrigation system and fencing according to Program B.							

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM A
FY 2000 -WORKPLAN**

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)		ESTIMATED COST	DATE	
						START	END
6. Final Reporting							
A. Draft a final report detailing the success of the projects/activities and identify future BMP projects.		Final draft report	PD	20 hours	566	4/1/01	6/30/01
			ESIII	20 hours	327		
			ESII	85 hours	1,202		
			S	25 hours	288		
B. Present final report to the Tribal Council.							

Personnel	Codes	Wage
Program Director	PD	28.31
Environmental Specialist III	ESIII	16.35
Environmental Specialist II	ESII	14.14
Environmental Specialist I	ESI	12.83
Secretary	S	11.50
WDE Director	WDED	33.00
WDE Coordinator	WDEC	28.00
WDE Ranch Manager	RM	12.83

Applicant Name and Address

Washoe Tribe of Nevada and California
919 Highway 395 South
Gardnerville, NV 89410

Contact Person

Tim Seward, Environmental Programs Director or
Marie Barry, Environmental Specialist II
(775) 265-4191
FAX: (775) 265-6240
Email: washoetribe@saturnnet.com

Project Introduction/Background

The Washoe Tribe has a long commitment to the restoration of Tribal lands and the aboriginal homelands. The Washoe Tribe has established several laws to protect the environment of Tribal lands, including a Planning Development law, Land Use Management Plan, Title 19-Water Code, and Title 17-Environmental Protection Code. In addition the Washoe Environmental Department in the last year has completed a final draft on Nonpoint Source Assessment and Management Program, Water Quality Standards (Draft) and a Sampling and Analysis Plan for the Water Quality Monitoring Program (Draft).

The Tribe has initiated many specific environmental restoration and protection projects to help minimize the impacts of a long term ranching operation and to improve water quality. The Tribe has joined forces with federal, state, and local governments to protect the Carson River Watershed environment (water quality, air quality, bank stabilization projects). The Tribe has worked with Tribal elders and the children on the restoration and recording of the knowledge base of traditional and customary stewardship and practices. The Tribe has also worked with federal, state, local, and private parties and committed the time of in-house legal counsel to ensure the protection of traditional gathering areas.

The Tribe's environmental restoration efforts will continue through these existing efforts, however, this 319 (h) grant funding is needed to implement measures to protect and to stride towards restoring water quality, watershed condition, and aquatic and riparian habitat on tribal lands as outlined in the Washoe Tribe of Nevada & California's Nonpoint Source Assessment and Management Program. The Carson River Watershed (CRW) is on the Nevada 303d list for exceeding impairments of phosphorus, sediment, and turbidity. The CRW is one of the EPA's targeted hydrologic unit areas. The CRW is also one of the 12 targeted areas on the National Clean Water Action Plan for coordinated restoration demonstration watersheds.

The projects will include riparian revegetation, streambank stabilization, and fencing (3 miles) projects along approximately 1.5 mile section of impacted area on tribal lands on the Carson River watershed. (Refer to Map 1. and Map 2.). Projects include the planting of native grasses and woody species, watering and caring for revegetated areas, placing in-stream structures for

bank stability and reduction of sediment loading, fencing riparian corridors, researching traditional resource uses and conditions, monitoring and evaluation of project outputs, educate tribal members of the benefits of using BMPs, teach tribal members how to carry out erosion control projects and proper construction of fences, and coordinate the projects with local, state, federal (Washoe Development Enterprise (WDE), USDA Natural Resource Conservation Service, Western Nevada Resource Conservation Council (WNRC&D), Washoe Heavy Equipment Training, Carson Valley Conservation District, Upper Carson River Management Group), agencies, and educational institutions (University of Nevada at Reno (UNR), *Washiw Wagayay Manal* (Washoe language immersion school)). The Washoe Tribe will be the lead organization with the above listed named as cooperating institution and agencies (Exhibit D). It is anticipated that the projects implementation will result in improved management of livestock grazing, erosion and sediment controls, stream protection and stabilization, riparian vegetation management, improved Tribal BMPs awareness, conservation and creation of wildlife habitat. These results will benefit surface water quality, ground water quality, and wildlife habitat.

Project Location

Washoe Tribal lands on the Carson River (Carson River watershed). (Figure 1). Maps 1 and 2 show exact locations of the project area).

Project Goals & Objectives

Program goal: To protect and restore water quality, watershed condition, and aquatic and riparian habitat on tribal lands as outlined in the Washoe Tribe of Nevada & California Nonpoint Source Assessment and Management Program.

Program objectives:

- 1) Installation of BMPs to improve water quality conditions.
- 2) Erosion and sediment controls using native plant vegetation and bank stabilization using bioengineering techniques (peek stone dykes, rock riprap, vegetation planting, wattling) Refer to attachments).
- 3) Stream corridor protection and stabilization by implementation of NPS management plan implementation of fencing (G-26 and G-27 attached) and native planting projects.
- 4) Protection and enhancement of woody riparian vegetation to provide shading for surface waters (wrap cottonwood trees for beaver damage protection).
- 5) Slope stabilization by revegetation, rock riprap, and fencing projects.
- 6) Reduction of excessive sediment transport and reduced stream temperatures on tribal lands.
- 7) Establish a Tribal BMP education program.
- 8) Conservation and creation of important wildlife habitat (Bald Eagles, Golden Eagles, waterfowl, upland game birds, mule deer etc.).

Project Activity/Description

The projects will include riparian revegetation, streambank stabilization, and fencing projects on approximately 1.5 mile section within Tribal lands on the Carson River watershed (Map 1 and Map 2). Projects include: 1) Planting of native grasses and woody species. 2) Watering and caring for revegetated areas. 3) Placing in-stream structures for bank stability and reduction of sediment loading. 4) Fencing riparian corridors, installation of solar water devices for livestock. 5) Monitoring and evaluation of project outputs. 6) Educate tribal members of the benefits of using BMPs by teaching tribal members how to carry out erosion control projects and proper construction of fences. 7) Coordinate the projects with cooperating agencies.

It is anticipated that the projects implementation will result in reduced sediment delivery, decreased late summer and winter stream temperatures, reduced delivery of nutrients and bacteria, increased bank stability, and improved tribal BMP understanding. These results will benefit surface water quality and ground water quality. Project completion will result in improved management of livestock grazing, erosion and sediment controls, stream protection and stabilization, riparian vegetation management, and improved fish and wildlife habitat.

Outputs/Deliverables

These outputs and deliverables are designed for a 12 month grant period. The implementation of the projects associated with stream revegetation or bank stabilization for best results should be implemented late October - March.

- Task 1: Completion by Month 3.
Assign tasks to personnel and identify any possible modifications needed in work-plan. Outline management plan objectives. Revegetation plan schedule and mark areas for fencing. Hire consultant for oversight of permit process, and implementation and inspection of construction of peek stone dykes, rock riprap projects. Schedule with Heavy Equipment Training Director and WDE staff. Coordinating a schedule with cooperating agencies.
- Output 1: List of assigned personnel with responsibilities. Schedule of activities.
- Task 2: Completion by Month 6.
Conduct training of tribal crews and volunteers. Identify plant stock to be used and make a timeline for collection or purchasing.
- Output 2: Training materials. Plant collection list. Design of dyke, riprap, irrigation.
- Task 3: Completion by Month 6.
Site assessments to identify establish points for water quality and sediment delivery tests to measure success of the implemented projects. Reassess after implementation.
- Output 3: Forms and procedures used in site assessments.
- Task 4: Completion by Month 11.

- Construct implementation projects. 1. Fencing (1.5 mile each side). 2. Stone spur, Rock riprap (BMP 4-3 attached) at Mallard Bend. 3. Installation of solar pumps and controllers, trackers, track rack, water sensors, piping and troughs (Sunelco attachment). 4. Revegetation on streambanks, sandbars etc.
- Output 4: Complete projects on approximately 1.5 mile section on Tribal lands along the Carson River Watershed. Quarterly reports.
- Task 5: Completion by Month 11.
Establish vegetation watering and care group and inspection schedule.
- Output 5: Schedule of watering and list of individuals.
- Task 6: Completion by Month 12.
Final draft report on as-built constructed projects (feet of fencing, acres/feet of vegetation planted, number of willows and cottonwoods planted/established, water quality and sediment test results) detailing the success of the projects/activities and identify plus prioritize future BMP projects.
- Output 6: Final draft report presented to the Washoe Tribal Council and EPA.

Milestones

These milestones are designed for a 12 month grant period. The implementation of the projects associated with stream revegetation or bank stabilization for best results should be implemented late October - March.

Component

Completion Date

Project start. Assign personnel to complete tasks.
Set schedule for project activities with cooperating agencies.
Assign tasks and identify any possible modifications needed in work-plan.
Hire consultant for construction and inspection of peek stone dyke and rock riprap project.
Contact and set schedule with Washoe Ranch Manager.
Contact Heavy Equipment Training and schedule work plan.
Volunteer list and field crew established.
Apply for any special permits.

3 months from start

Revegetation plan and outlined areas for fencing.
Conduct training of tribal crews and volunteers.
Completion of design for dyke and rock riprap.
Identify plant stock to be used and make a timeline for collection and purchasing. Site assessments to identify characteristics of specific areas for best planting results.

6 months from start

Plant collection and preparation.
Monitoring of implemented projects and water quality measures.

On-going

Construct implementation projects.

8 months from start

Final report (Draft to the Washoe tribal council and EPA)

12 months from start

BUDGET

LINE ITEM	CALCULATION	EPA REQUEST	INKIND MATCH
Personnel			
Environmental Department Director	Range 35, Step A: (\$28.31/hour) x 300	8,493	
Environmental Specialist III	(\$16.35/hour) x 326	5,330	
1 FTE Environmental Specialist II	Range 19, Step E (14.14/hour) x 500	7,070	
Environmental Specialist I	Range , Step (\$12.83/hour) x 300	3,849	
Secretary	\$11.50/hour x 80	920	
WDE Director	\$33/hr x 16		528
WDE Asst. Coordinator	\$28/hr x 20		560
WDE Ranch Manager	\$12.83/hr x 100		1,283
Construction Crew for Habitat Restoration (Western Nevada Resource Conservation & Development, Inc.)	\$8/hour x 10 workers x 10hr/day x 8days		6,400
Subtotal Personnel		26,662	8,771
Fringe Benefits			
FICA	0.0765	1,963	671
FUTA	0.008	205	70
SUTA	0.018	462	158
SIIS	0.0221	567	194
Health Insurance	\$250/mo x 2 FTE x 12	6000	
Vacation Liability	.004 x sub personnel	1026	
Subtotal Fringe Benefits		10,224	1,093
Subtotal Personnel & Fringe		36,886	9,864
Travel			
Non Local Training	Airfare: 2 pers @ \$250 each.	500	
	Per Diem: 2 pers @ \$125/day x 3 days	750	
Subtotal Travel		1,250	
Contractual			
Water/Sediment Testing University of Nevada, Reno	80 hours @ \$150/hour	12,000	

EPA Non-Point Source Project B

Submitted by the Washoe Tribe of Nevada and California – April 28, 2000

Consultant: Permits, Engineering/Construction and Inspection of stone spur and rock riprap (Stream Projects at Mallard Bend)		8,000	
3 Field Workers	\$10/hr x 3 workers x 200 hours	6,000	
7 Youth Volunteers	\$10/hr x 7 volunteers x 80 hours		5,600
Subtotal Contractual		26,000	
Equipment			
Stone spur and riprap materials		50,000	
Subtotal Equipment		50,000	
Supplies			
Field Supplies	Shovels, picks, axes, gloves, watering devices, etc.	1,021	
Subtotal supplies		1,021	
Other			
Fencing	12,000 linear feet x \$1/ft	12,000	
Livestock watering devices	\$2,300 x 3	6,900	
Revegetation Plants (Retail not Tribal value) Willow clump 35 @ \$75 each = \$2,625, willow 5ft section 2,000 @ \$5 each = 10,000, willow 2ft section 7,000 @ \$1 = \$7,000.			19,625
Grasses, watering supplies and cottonwood trees.		1,000	
Subtotal Other		19,900	19,625
Total Direct Costs		134,057	35,089
Indirect costs @ 19.2% minus contractual and equipment		15,943	5,662
Total Project Costs		150,000	40,751

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM B
FY 2000 -WORKPLAN**

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)		ESTIMATED COST	DATE	
						START	END
1. Administrative Duties							
A. Assign tasks to personnel and identify any possible modifications needed in workplan.		List of assigned personnel with responsibilities.	PD	135 hours	3,822	A. 7/1/00	8/1/00
			ESIII	65 hours	1,063	B. 7/1/00	8/1/00
			ESII	125 hours	1,768	C. 7/1/00	9/30/00
B. Coordinate a schedule for surveys with NCD, NRCS, NDOW: Range Analysis, Complete Soils Inventory, Cottonwood Inventory, Riparian Vegetation Inventory, Fisheries, Engineering design, Stream cross sections, photo points, riparian evaluation, erosion points, etc.		Schedule of activities.	ESI	44 hours	566	D. 7/1/00	9/30/00
			S	71 hours	817	E. 7/1/00	10/2/00
			WDED	8 hours	264	F. 7/1/00	8/1/00
			WDEC	10 hours	280	G. 7/1/00	6/30/01
		Quarterly/Annual reports	RM	10hours	128	H. TBA	
			C		10,000	I. 7/1/00	6/30/01
C. Schedule with Heavy Equipment Training Director and WDE staff.							
D. Outline management plan.							
E. Revegetation plan schedule and mark areas for fencing using GPS.							
F. Hire a consultant to obtain permits for implementation and inspection of construction of stone spur, rock riprap projects.							
G. Draft Quarterly/Annual reports.							
H. Report to Tribal Council and WDE Board.							
I. Purchase materials, office supplies etc.							

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM B
FY 2000 -WORKPLAN**

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)		ESTIMATED COST	DATE	
						START	END
2. Fencing/Revegetation Training							
A. Conduct training of tribal crews and volunteers for fencing and revegetation projects.		Training materials	PD	10 hours	283	7/1/00	1/1/01
			ESIII	40 hours	654		
		Plant collection list	ESII	100 hours	1,414		
			ESI	80 hours	1,026		
			RM	10 hours	128		
B. Identify plant stock to be used for revegetation projects and make a timeline for collection or purchasing.		Design of rock dyke, rock riprap, irrigation.	FW	80 hours	2,400		
3. Site Assessments							
A. Contract with UNR to conduct Site assessments: identify and establish points for water quality and sediment delivery tests to measure success of the implemented projects.		Forms and procedures used in assessment and data collected.	PD	60 hours	1,699	7/1/00	1/1/01
			ESIII	80 hours	1,308		
			ESII	100 hours	1,414		
			ESI	30 hours	385		
			UNR	80 hours	12,000		
B. Conduct monitoring activities.						B. 7/1/00	5/1/01
C. Reassess after implementation.							

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM B
FY 2000 -WORKPLAN**

DESCRIPTION OF TASKS	STATUS	OUTPUT	PERSON/YEARS (2080 HOURS = 1 YEAR)	ESTIMATED COST	DATE START END
4. Implementation of Projects A. Construct and implement projects. 1. Fencing 2. Stone spur/rock riprap 3. Installation of solar pumps and controllers, trackers, track rack, water sensors, piping and troughs. 4. Revegetate streambanks, sandbars etc. B. Report of progress to WEPD Director (2-3p).		Report of completed projects on approximately 1.5 mile section on Tribal lands along the Carson River Watershed.	PD 10 hours ESIII 100 hours ESII 220 hours ESI 250 hours WDED 8 hours WDEC 10 hours RM 80 hours FW 170hours CC	283 1,635 3,111 3,208 264 128 1,026 5,100 6,400	10/1/00 5/1/01
5. Vegetation Care Group A. Establish a vegetation watering/care group and inspection schedule. B. Develop a long-term monitoring schedule.		Schedule of watering and list of individuals.	PD 25 hours ESII 80 hours ESI 40 hours V 80 hours	708 1,131 513 5,600	2/1/01 5/1/01
4. Final Reporting A. Draft a final report on as-built constructed projects (feet of fencing, acres/feet of vegetation planted, number of willows and cottonwoods planted/established, water quality and sediment test results) including identified prioritized future BMP projects. B. Present final report to the Tribal Council.		Final draft report	PD 60 hours ESIII 40 hours ESII 25 hours S 35 hours	1,699 654 354 403	4/1/01 6/30/01

**WASHOE TRIBE OF NEVADA AND CALIFORNIA
NONPOINT SOURCE 319(h)
PROGRAM B
FY 2000 -WORKPLAN**

Personnel	Codes	Wage
Program Director	PD	28.31
Environmental Specialist III	ESIII	16.35
Environmental Specialist II	ESII	14.14
Environmental Specialist I	ESI	12.83
Secretary	S	11.50
WDE Director	WDED	33.00
WDE Coordinator	WDEC	28.00
WDE Ranch Manager	RM	12.83
3 Field Workers	FW	10.00
Consultant	C	75.00
10 Conservation Crew Members	CC	8.00
7 Youth Volunteers	V	10.00
UNR	UNR	150.00

RESOLUTION OF THE GOVERNING BODY

OF THE

WASHOE TRIBE OF NEVADA AND CALIFORNIA

WHEREAS, the Washoe Tribe of Nevada and California is organized under the provisions of the Indian Reorganization Act of June 18, 1934, (48 Stat. 594) as amended, to exercise certain rights of home rule and be responsible for the general welfare of it's membership; and

WHEREAS, the Washoe Tribe is engaged in a significant effort to ensure water quality that is sufficient for traditional and customary water uses; and

WHEREAS, the Tribe is currently working with the U.S. Environmental Protection Agency on a Clean Water Grant to develop water quality standards and have submitted draft standards to EPA for review; and

WHEREAS, non-point sources (NPS) of pollution are a significant threat to water quality, especially in the Carson Valley where agricultural uses and road runoff are common problems; and

WHEREAS, the Tribe's draft water quality standards include Best Management Practices (BMPs) as a means of controlling NPS pollution; and

WHEREAS, the Washoe Tribe Environmental Department will apply for both the thirty thousand dollars (\$30,000) administrative funding and the competitive non-point source project funding for an amount up to one hundred fifty thousand dollars (\$150,000) to initiate projects which will control NPS pollution through the implementation of BMPs on riparian areas located within Washoe Tribal lands.

NOW, THEREFORE, BE IT RESOLVED THAT the Tribal Council authorizes and approves an application to the Environmental Protection Agency for a Non-Point Source Grant application.

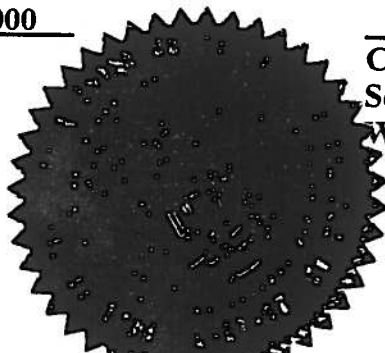
BE IT FURTHER RESOLVED that the Tribal Chairman, Vice-Chairman or Secretary/Treasurer is authorized to sign on behalf of the Washoe Tribe of Nevada and California and to negotiate, extend or amend this grant as awarded.

CERTIFICATION

It is hereby certified that the Washoe Tribal Council is the governing body of the Washoe Tribe of Nevada and California, composed of twelve (12) members of whom eleven (11), constituting a quorum, were present at a meeting duly held on the 11th day of February, 2000, and that the foregoing resolution was adopted by the affirmative vote of 10 for, 0 against, 0 abstentions pursuant to the authority contained in Article VI, Section 1(h) of the Amended Constitution of the Washoe Tribe of Nevada and California.

February 14, 2000

Date

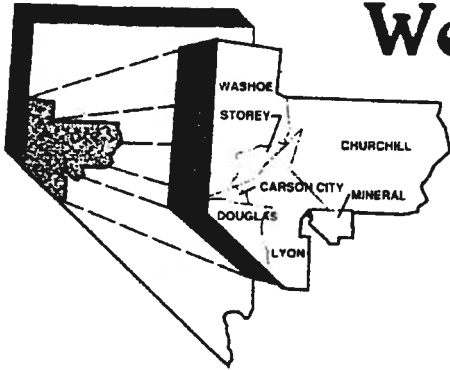


Carolyn M. Kenton

Carolyn M. Kenton

Secretary/Treasurer

Washoe Tribal Council



Western Nevada

Resource Conservation &
Development, Inc.

P.O. Box 3543
Carson City, Nevada 89702

(702) 883-2292

February 17, 2000

A. Brian Wallace, Chairman
Washoe Tribe of Nevada and California
916 US 395 South
Gardnerville, NV 89410

Re: Clean Water Act, Section 319 Grant support

Dear Chairman Wallace:

The Western Nevada Resource Conservation and Development Council (WNRC&D) strongly supports the Washoe Tribe's application for Non-Point Source Pollution Control Grant Section 319 Clean Water Act.. Our WNRC&D Council is composed of eight (8) conservation districts, six (6) county governments, three (3) water districts, and two (2) Indian Tribes. Our goals are to find solutions to the watershed wide problems facing Western Nevada. The Washoe Tribe's commitment to improving your natural resources is commendable.

The Washoe Tribe is a key player in Carson River Watershed Restoration, where you manage over 65,000 acres of the basin. The implementation of demonstration projects, regulations, ordinances and a Washoe Environmental Center on the Stewart Ranch lands will serve as a BMP laboratory for water quality improvements, erosion and sedimentation control, livestock management, and fish and wildlife habitat restoration for the tribe and the citizens of our watershed.

The WNRC&D in association with local conservation districts and the Natural Resources Conservation Service is committed to providing technical plans, designs, and implementation oversight to this effort. Our supports could include the following expertise:

1. Engineering (survey and design)
2. Soil Scientist
3. Grazing Management
4. Wildlife Biology
5. Grant writing and searches
6. Permitting
7. Coordination and facilitation
8. Erosion inventory.

A commitment of \$30,000.00 of technical support over the next two years, is available for the Washoe Tribe through our Council and partnership support organizations.

If we can be of any further assistance, please do not hesitate to contact us at 775-883-2292.

Sincerely,

DANIEL A. KAFFER
WNRC&D Coordinator
USDA-NRCS

CARSON CITY • CHURCHILL • LYON • STOREY • WASHOE
WALKER RIVER PAIUTE & PYRAMID LAKE INDIAN RESERVATION

February 29, 2000

A. Brian Wallace, Chairman
Washoe Tribe of Nevada and California
919 U.S. Highway 395 South
Gardnerville, Nevada 89410

Dear Mr. Wallace,

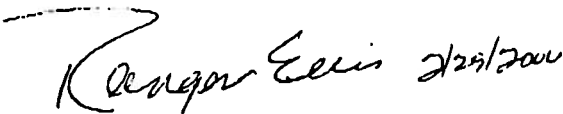
I am writing to express my support for the Washoe Tribe of Nevada and California's grant application funds to develop and implement the Washoe non-point source management project on a portion of the Carson River located on Washoe Tribal lands, known as the Stewart Ranch. This project will involve the installation of rock riprap and other related stream bank stabilization activities, including the planting of appropriate riparian vegetation.

The Washoe Heavy Equipment Training School provides classroom education and field training for students. The installation of rock riprap exemplifies the type of training opportunity we attempt to provide our students. We will commit to work with the Washoe Environmental Protection Department to implement this project on the Stewart Ranch lands. The Washoe Heavy Equipment Training School would provide the heavy equipment for the project and the work would be performed by students under the supervision of Training instructors. We understand that the Environmental Department and their other project partners, including the Natural Resource Conservation Service will provide the materials, design, and manual labor for the project.

In addition to providing our students with a valuable training opportunity, we also recognize the environmental importance of mitigating stream bank erosion on the Carson River and protecting Tribal natural resources.

If you have any questions, please feel free to contact me at (775) 265-5950.

Sincerely,



Ranger Ellis
Heavy Equipment Director

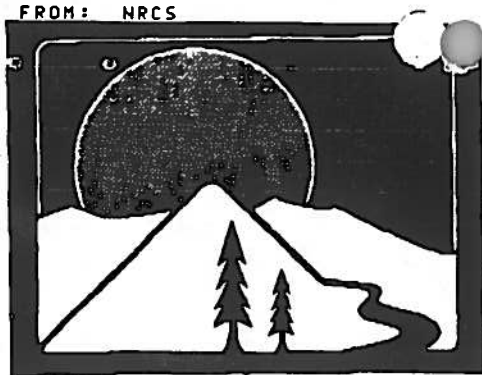
A. Brian Wallace, Chairman
Washoe Tribe of Nevada and California
919 U.S. Highway 395 South
Gardnerville, Nevada 89410

I am writing to express my support for the Washoe Tribe of Nevada and California's grant application funds to develop and implement the Washoe non-point source management project on a portion of the Carson River located on Washoe Tribal lands, known as the Stewart Ranch. In addition to the installation of stream bank stabilization mechanisms, this project will include fencing, the installation of solar irrigation devices, the planting of appropriate riparian vegetation, and the development and implementation of a grazing plan that satisfies the Best Management Practices adopted by the Washoe Tribe.

Specifically, WDE agrees to commit at least 125 hours of the Ranch Managers time to the development of the Grazing Plan and implementation of grazing uses , and at least 100 hours of the Ranch Managers time to install fencing, the solar irrigation devices, and collection of willow bundles for planting in the project site. The WDE Assistant Coordinator also agrees to commit at least 32 hours of her time on developing and reviewing the Grazing Plan and grazing uses and 20 hours monitoring the implementation of the stream bank stabilization activities and installation of the solar irrigation devices and fencing. Additionally, I agree to commit no less than 16 hours of my time reviewing the grazing system and 10 hours monitoring the installation of the erosion control activities.

Sincerely,

Kurt Weissheimer, Director

**Carson Valley Conservation District**

152B Highway 395 #100
Gardnerville, NV 89410
Phone: (702) 782-3661
FAX: (702) 782-3547

A. Brian Wallace
Tribal Chair, Washoe Tribe of Nevada and California
Gardnerville, NV

Dear Chairman Wallace,

The Carson Valley Conservation District offers its whole-hearted support to efforts by the Washoe Tribe of Nevada and California to obtain grant funding for Non Point Source pollution abatement.

The Tribe's 319h grant request has objectives consistent with and complimentary to the Conservation District's mission and long range goals. This grant will address significant streambank erosion on the Carson River.

We commend the efforts of the Tribe to improve environmental quality through self-regulation, wise use of natural resources, and a deep concern for the well being of future generations.

Sincerely,

A handwritten signature in dark ink, appearing to read 'James Settelmeyer', with a long horizontal flourish extending to the right.

James Settelmeyer
Chairman, Carson Valley Conservation District

February 29, 2000

Dr. Dietrick McGinnis
775.327.2260
mcginnis@scs.unr.edu

Dean Adams
775.784.1474
vdadams@scs.unr.edu

To: Marie Barry
Washoe Tribe of Nevada and California
919 Highway 395 South
Gardnerville, Nevada 89410
Phone: 775.883.1446 Fax: 6240

Re: USEPA Section 319(h) Nonpoint Source Pollution Program

We would like to thank you for requesting the participation of our department with this proposal. This proposed demonstration project has the potential to an important joint project between the University of Nevada Reno and the Washoe Tribe of Nevada and California. The objective of this partnership is to work with the Tribe to restore and meet important environmental quality goals and provide educational and research opportunities to University students, faculty and Tribal members.

For this specific project, our department can provide the following:

1. Technical assistance selecting and implementing measures to monitor and reduce non-point pollution.
2. Monitoring of water quality parameters in demonstration area (see attachment).
3. Assistance developing technology transfer documents and reports.

We appreciate the opportunity to work with the Washoe Tribe of Nevada and California and look forward to continuing to develop this partnership. Pursuing this important funding opportunity may be the best way to develop our partnership as it presents a challenge; expanding this project through continued collaboration.

Specific Analysis to be performed:

Total Dissolved Solids
Conductivity
Total Suspended Solids
Turbidity
Color
Nitrate
Nitrite
Total Nitrogen
Total and Ortho Phosphorus
Total Organic Carbon
Calcium, Magnesium and Sodium
Chloride and Sulfate
Alkalinity, pH and Hardness

Field analysis performed by Washoe Tribe during sample collection:

Flow measurements
Temperature
pH
Conductivity

Our laboratory will provide containers and assist with the sampling plan for use during sample collection by the Washoe Tribe. This can include site visits for the first two sampling events. We will run up to 4 samples from 4 sampling points every other month (a total of 24 samples). In addition, we can perform analysis for a one-time phosphorus study or an additional sampling event.



406/363-6922
800/338-6844
FAX 406/363-6040

THE SUN ELECTRIC COMPANY

WASHOE TRIBE OF NV/CA
DARRYL CRUZ

March 1, 2000

QUOTATION

FOR YOUR SYSTEM WE PROPOSE THE FOLLOWING:

PAGE 1

QUANTITY	COMPONENTS\DESCRIPTION	EACH	TOTAL
2	KYOCERA KC80 80W SOLAR MODULE, PRODUCES 4.73 AMPS AT 16.9 VOLTS, MULTI-CRYSTALLINE CELLS, ALUMINUM FRAME, TEMPERED GLASS, 25 YEAR OUTPUT WARRANTY (P/N 15483)	429.00	858.00
1	30" #10 AWG 2 WIRE MODULE INTERCONNECT IN 1/2" FLEXIBLE NON-METALLIC CONDUIT (P/N 43607)	18.00	18.00
1	ZOMEWORKS 20 SQUARE FOOT UNIVERSAL TRACK RACK, FOLLOWS THE SUN FROM EAST TO WEST, J-CLIPS HOLD MODULES SECURELY TO TRACKER RAILS, MOUNTS ON 2.5" SCH 40 STEEL PIPE, 10 YEAR WARRANTY (P/N 20370)	489.00	489.00
1	SOLARJACK SDS-D-128 DUPLEX SUBMERSIBLE POSITIVE DISPLACEMENT DIAPHRAGM PUMP, FLOW RATE OF 2 GPM AT OPEN DISCHARGE, 115' MAXIMUM LIFT, CONSTRUCTED OF 304 STAINLESS STEEL AND MARINE GRADE BRONZE, FITS IN 4" WELL CASING, 1/2" NPT OUTLET, 18 LBS, 1 YEAR WARRANTY (P/N 85200)	569.00	569.00
1	SOLARJACK PCA 10-30B PUMP CONTROLLER FOR SDS PUMPS, MAXIMIZES DAILY WATER PRODUCTION, LINEAR CURRENT BOOSTER, ADJUSTABLE VOLTAGE OUTPUT, LED's INDICATING POWER IN/POWER OUT AND OVERLOAD CONDITIONS, TERMINALS FOR FLOAT SWITCH OR LOW WATER CUTOFF ELECTRODES, 1 YEAR WARRANTY (P/N 85802)	229.00	229.00
3	LOW WATER CUTOFF ELECTRODES, WIRES DIRECTLY INTO A SOLARJACK PUMP CONTROLLER, SET OF 3 REQUIRED (P/N 85930)	8.00	24.00
1	FLOAT SWITCH, WIRES DIRECTLY INTO A SOLARJACK PUMP CONTROLLER (P/N 85932)	32.00	32.00
SYSTEM TOTAL:			2219.00
SHIPPING ESTIMATE:			81.00
TOTAL WITH SHIPPING			2300.00

TERMS; CHECK, CASH, CREDIT CARD OR MONEY ORDER.



406/363-6924

800/338-6844

FAX 406/363-6046

THE SUN ELECTRIC COMPANY

Dear Darryl,

I was not sure which pump you were looking at. I quoted the SDS-D-128 I could get you the SDS-D-228 at the same price. The quad version will cost a little more.

As far as the trackers are concerned, ZOMEWORKS has incorporated most of the high wind features into their new line of Universal Track Racks (UTR) except for the UTR 40, in which you can still get a highwind option for an extra \$150. Actually the UTR 55 is more than you need for those two panels. A UTR 20 will carry the two KC80's just fine. It is also light enough to ship UPS. Were you oversizing the tracker because of the wind?

I did not include the sensor wire for the electrodes or the sub pump wire.

I also managed to cut a better deal for you than full retail, ie. catalog prices.

Let me know if this works for you. As always we will supply a wiring diagram with the sale.

Thanks,

Nick Mariana

BMP 3-2 WATTLING

DEFINITION

Wattling is a revegetation technique consisting of placing bundles of willow cuttings in shallow trenches, on the contour of either cut or fill slopes.

PURPOSE

To stabilize cut or fill slopes, to stabilize the soil surface, to reduce the velocity of surface runoff, to trap sediment, to increase infiltration, and to establish vegetation.

APPLICABILITY

Applicable to surface disturbances involving cut or fill slopes. Slope lengths can be interrupted by rows of wattling. Wattling is not applicable to excessively steep slopes. As a type of revegetation, wattling is applicable on moist sites or seeped areas.

PLANNING CRITERIA

Wattling is a valuable method to help achieve surface stability on a cut or fill slope which is near its angle of repose, but continues to erode due to surface runoff. Wattling bundles can vegetatively root and sprout and continue to stabilize slope surfaces as a revegetation planting. Rooting and sprouting will occur if adequate moisture is available at the time of placement and the first growing season. Temporary irrigation can be very effective during establishment. In addition to sprouting and revegetating the site, the placement of the wattling bundles along the contours can reduce slope lengths which can provide long, uninterrupted paths for surface runoff. The rows of wattling bundles act as small sediment traps and increases the amount of infiltration on site. Thus, wattling should not be prescribed as a treatment on cut banks with shallow soils. The increased infiltration will saturate the subsoil and may lead to soil slippage and landslides.

METHODS AND MATERIALS

The following steps for preparing and placing the wattling bundles are recommended:

1. Wattling bundles should be prepared from living branches of willow (Salix spp.) within or near the project area. Willow is the ideal material because it sprouts and roots easily, branches are long, straight, and flexible. Wattling material can be cut with lopping shears, chain saws, or power brush cutting saws.

2. Wattling bundles may vary in length, depending on the material available. Bundles 5 feet long are the easiest to work with. Bundles shall taper at the ends and shall be 1 to 1/2 feet longer than the average length of stems used to achieve this taper. The butts of individual stems shall not vary more than one half inch in diameter.
3. Stems shall be placed alternately (randomly) in each bundle so that approximately one-half of the butt ends are at each end of the bundle.
4. When compressed firmly and tied, each bundle shall be approximately eight inches in diameter.
5. Bundles shall be tied on not more than 15 inch centers with two wraps of binder twine or heavier tying material with a nonslipping knot.
6. Bundles shall be prepared in advance of placement and kept covered and wet. They may be prepared up to seven days in advance of placement.
7. Grade for the wattling trenches shall be staked with an Abney level, or similar device, and shall follow slope contours (horizontal).
8. Trenches shall be three feet vertical spacing (or such other spacing specified. Economics may dictate wider placement).
9. Bundles shall be laid in trenches dug to approximately one-half the diameter of the bundles, with ends of bundles overlapping at least 12 inches. The overlap shall be as long as necessary to permit staking as specified below.
10. Bundles shall be staked firmly in place with vertical stakes on the down-hill side of the wattling. Vertical stakes should be spaced not more than 18 inches on center and diagonal stakes through the bundles on not more than 20 inch centers (See Figure 3-1). Where bundle overlap occurs between previously set bottom or guide stakes, an additional bottom stake shall be used at the midpoint of the overlap. Bundle overlaps shall be "tied" with a diagonal stake through the ends of both bundles.
11. Stakes may be made of live wattling material greater than 1 1/2 inches in diameter or they may be construction stakes (1" x 2" x 24" or 1" x 2" x 36"). Reinforcing bar may be substituted only as specified below.
12. All stakes shall be driven to a firm hold and a minimum of 18 inches deep. Where soils are soft and 24 inch stakes are not solid (i.e. if they can be moved by hand), 36 inch stakes shall be used. Where soils are so compacted that 24 inch stakes cannot be driven 18 inches deep, 3/8 - 1/2 inch steel reinforcing bar shall be used for staking.

13. Work shall progress from the bottom of the cut or fill toward the top and each row shall be covered with soil and packed firmly behind and on the uphill side of the wattling by tamping or by walking on the wattling as the work progresses or by a combination of these methods.
14. The downhill "lip" of the wattling bundle shall be left exposed when staking and covering are completed. However, the preceding specification must be rigorously adhered to.

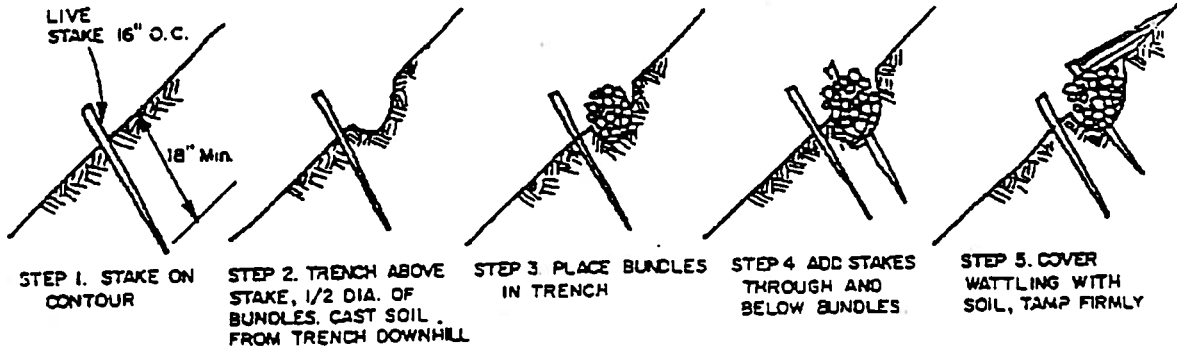
MAINTENANCE

Regular inspection and maintenance of wattling installations should be conducted, especially during the first year and after each precipitation or storm event. Any stakes or bundles which have worked out of the ground should be repaired immediately. Some areas of the slope may slough and lead to gully formation. Immediate repair of any failures is essential to prevent major problems from developing.

EFFECTIVENESS

Wattling is very effective if properly installed according to the design criteria. The wattle bundles will sprout and root, binding the soil with roots and protecting the surface with the above-ground parts. Wattling is a labor intensive practice.

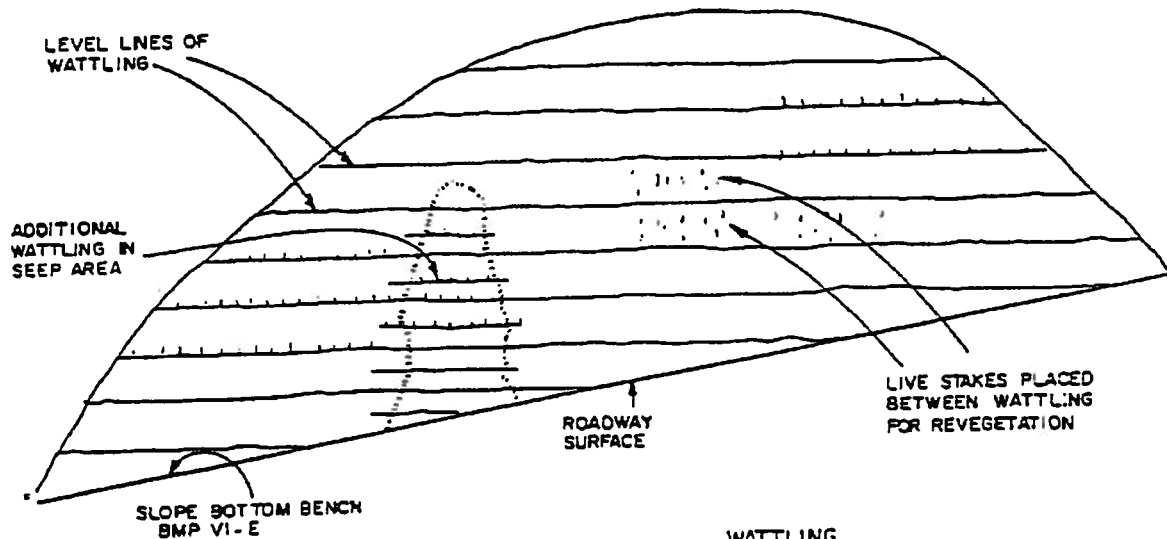
WATTLING FIGURE 3-1



- NOTE
1. WORK FROM BOTT TO TOP OF CUT OR FILL
 2. WALK ON BUNDLES TO COMPACT OVERLAY SOIL
 3. STAKES SHOULD BE LIVE WATTLING MATERIAL
 4. SPACING OF ROWS SHALL BE DETERMINED BY BMP IV-8



PREPARE WATTLING: CIGAR-SHAPED BUNDLES OF LIVE BRUSH WITH BUTTS ALTERNATING, 8-10" DIA., TIED 12-15" O.C. SPECIES WHICH ROOT ARE PREFERRED



BMP 3-3 BRUSH LAYERING

DEFINITION

Brush layering consists of embedding tree branches of shrub or tree species, preferably those that will root, such as willows, on horizontal rows or contours in the face of a slope.

PURPOSE

To stabilize cut or fill slopes, to stabilize the soil surface, to reduce the velocity of surface runoff, to trap sediment, to increase infiltration, and to establish vegetation.

APPLICABILITY

Applicable to newly constructed cut or fill slopes or as a reclamation measure for seriously eroded and barren slopes. Slope lengths can be interrupted by rows of brush layering. The method is not applicable on very steep slopes. As a type of revegetation, brush layering is most applicable on moist sites or seeped areas.

PLANNING CRITERIA

Brush layering is a valuable method to achieve slope stabilization on cut or fill slopes or to reclaim seriously eroded or barren slopes. The method can be viewed as a combination of vegetative and mechanical means for slope stabilization. The brush layers can root and vegetatively stabilize the soil surface as a revegetation planting. The woody branches are also used as the soil stabilizing and reinforcing material. The placement of the brush layering along the contours can reduce slope. The rows of exposed branches act as small sediment traps and increase the amount of infiltration on site.

Brush layering has been used successfully in repairing partial fill slope failures. The slope angle may have to be decreased to the angle of repose, and the toe of the slope reconstructed with properly designed retaining structures.

METHODS AND MATERIALS

The following steps for brush layering are recommended:

1. Obtain willow cuttings from on-site or as close to the site as possible.
2. The brush branch (cutting) length should be three to five feet long.
3. The cuttings should be 3/4 to 2" in diameter.

BMP 4-3 ROCK RIPRAP

DEFINITION

Rock riprap is a layer of loose rock placed over an erodible soil or surface disturbance.

PURPOSE

To protect the soil surface, to provide for slope stabilization on steep slopes and to reduce soil erosion within a project area.

APPLICABILITY

Rock riprap is primarily utilized in drainage stabilization projects such as channel and ditch linings and energy dissipators. Rock riprap is used on steep, difficult slopes where vegetation has not been successful. Seed, shrubs and trees have been incorporated with rock riprap by interplanting.

PLANNING CRITERIA

A source of rock riprap of the appropriate size and the associated transportation costs are the primary planning criteria. Depending upon the application, rock riprap can be utilized with revegetation efforts but the establishment of permanent vegetation is preferred for long term stability and maintenance. Rock riprap applied to active drainageways or channels usually requires an underlining of matting or fabric to prevent erosion.

METHODS AND MATERIALS

The rock riprap should be sound, dense and durable rock with a specific gravity of not less than 2 1/2 and greater than 12 inches in diameter. Seeding should occur prior to rock placement. If to be used within an active drainage channel, a synthetic mat or fabric should be installed prior to rock placement. Depending on the specifics of the site rock riprap can be placed by hand or by equipment. Existing trees and vegetation should be protected and rock riprap placed by hand in these areas. Rocks should be securely bedded and homogeneous in the layering. Depth of application depends upon the size of the drainageway, slope degree and length and the other specifics of the site.

MAINTENANCE

Little maintenance is required when rock riprap is installed properly. Periodic inspections should be made and any dislodged rocks replaced as required.

Appendix G-6

FENCING - GUIDELINES

Fences are needed in a number of land treatments for water quality management:

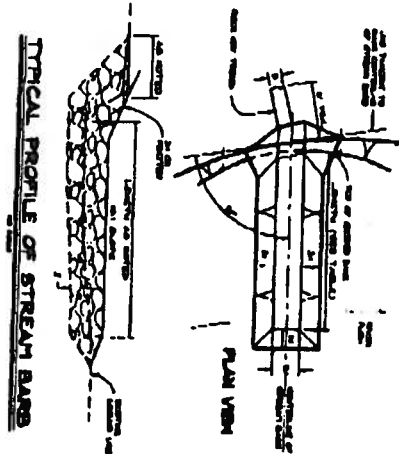
1. To exclude livestock, wildlife and federal horses from critical erosion areas, areas of toxic wastes from mining or other industry, and from critical riparian zones.
2. To control access of vehicles and people to critical erosion areas and danger zones.
3. To subdivide grazing lands and regulate grazing use.
4. To protect revegetation planting during the establishment period.

PLANNING CRITERIA

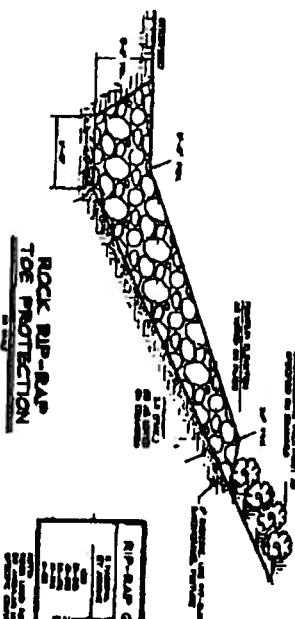
1. Design fence to meet the specific objectives of the project.
2. Where legal fences are needed, they must meet the requirements of State Statutes of Nevada and the Federal land manager.
3. Select fencing materials on the basis of availability, cost, soil conditions, and objectives of the fence.
4. Where possible, avoid snowdrift areas, erosive soils, steep slopes and game migration routes.
5. Make maximum use of natural barriers.
6. Avoid creating livestock and wildlife traps; fences should not point in at sharp angles to other fences or natural barriers.
7. Fence lines should be clear of brush and trees.
8. Special provisions should be made where wildlife crossings are needed. Consult game management specialists.

STANDARD GUIDELINE SPECIFICATIONS

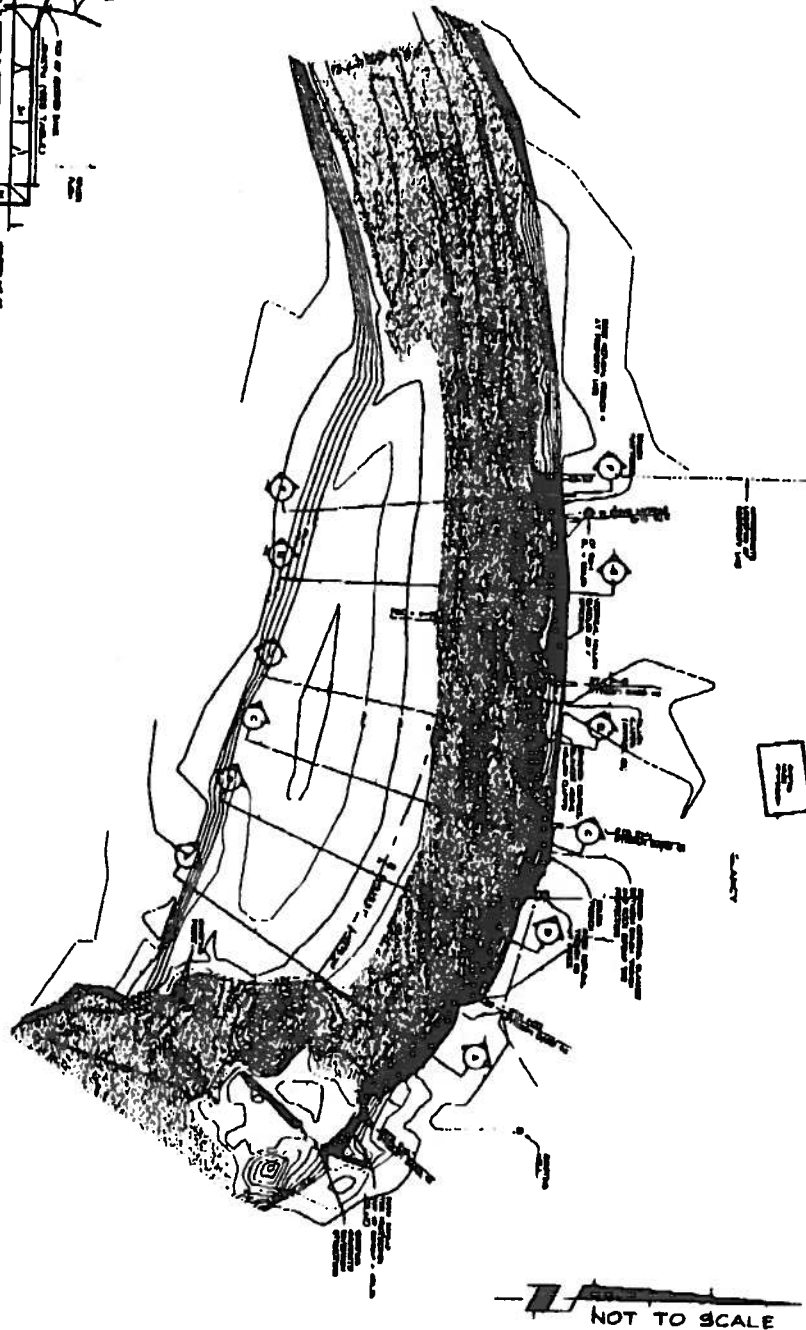
1. Space posts a maximum of 20 feet apart (wood posts for suspension fences a maximum of 120 feet).
2. Post sizes - wood posts six feet long with a three inch top diameter (corner posts seven to eight feet long with a five inch top); steel posts 5-1/2 feet long; 1-1/3 pounds per foot and with anchor plate. Wood posts, except juniper, should be butt-treated. Set posts 1-1/2 to two feet deep. Where higher fences are needed, longer posts will be required.
3. Brace post assemblies should be placed:
 - (a) 1320 feet apart in a straight line fence on moderate terrain.
 - (b) At each gate.
 - (c) At each turn of 15 degrees or more.
 - (d) At each point of change in the vertical angle of 10 degrees or more.
4. Barbed wire should be heavy duty galvanized, minimum gauge 12-1/2 with a minimum of four wires spaced 12 inches apart, top wire a minimum of 42 inches above the ground and bottom wire a maximum of 12 inches above the ground, except where passage of wildlife under the fence is desired.
5. Woven wire should be heavy duty galvanized with a minimum of one strand of barbed wire on top at a minimum of 42 inches above the ground. Chain-link fencing can also be used. High fences may be needed for certain uses.
6. Staples should be nine gauge or heavier, 1-1/2 inches long (2-1/2 inches for suspension fences.)
7. Use wire stays spaced 10 to 16 feet apart between posts on suspension fences. Special metal clips can be used in lieu of staples on suspension fences.
8. Electric fences can be used where temporary exclusion of livestock is needed, such as in range seedings.
9. Consider the use of solar electric fences when temporary fencing is needed to restrict use in critical riparian zones.



ROCK GRADATION BAR AND DIKE	
1/2" - 1/4"	10%
1/4" - 1/2"	20%
1/2" - 3/4"	30%
3/4" - 1"	40%
1" - 1 1/2"	50%
1 1/2" - 2"	60%
2" - 2 1/2"	70%
2 1/2" - 3"	80%
3" - 3 1/2"	90%
3 1/2" - 4"	100%



RIP-RAP GRADATION	
1/2" - 1/4"	10%
1/4" - 1/2"	20%
1/2" - 3/4"	30%
3/4" - 1"	40%
1" - 1 1/2"	50%
1 1/2" - 2"	60%
2" - 2 1/2"	70%
2 1/2" - 3"	80%
3" - 3 1/2"	90%
3 1/2" - 4"	100%



Roanderson
ENGINEERING INC.

1624 10th STREET, P.O. BOX 2294, MINDEN, NV 89423
PH. (775) 782-2822 FAX (775) 782-7084
EMAIL: ROAD@ROANDERSON.COM

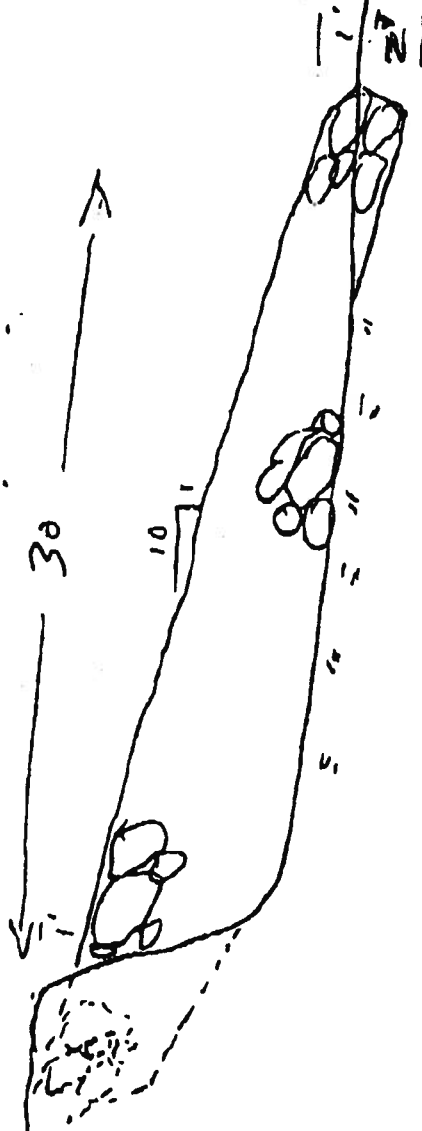
**CARSON RIVER RESTORATION PROJECT
DAYTON VALLEY CONSERVATION DISTRICT
SITE PLAN**

582-02-98

08/25/99

NOTES

UNITED STATES - THE NETHERLANDS MEETING ON DREDGING AND RELATED TECHNOLOGY



Key into bank

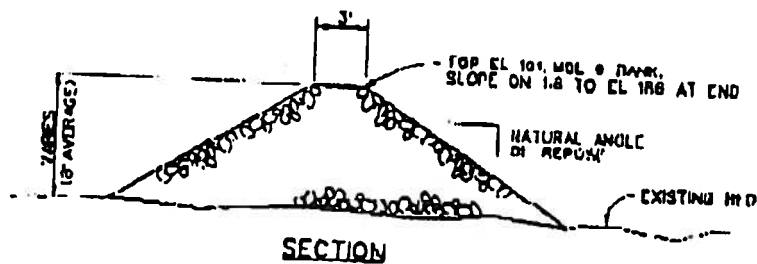
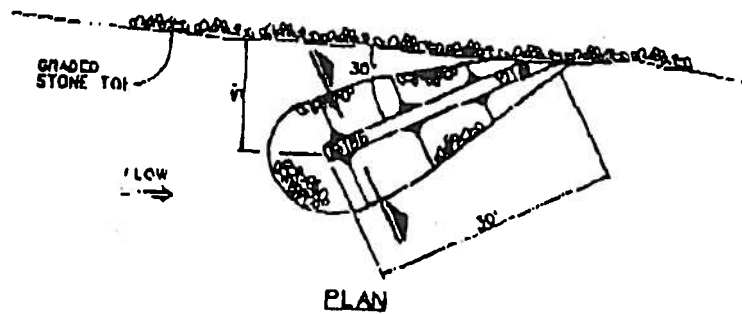
Key into streambed minimum 3'

Maintain 10:1 Slope

Elevation (top) coincide w/ the elevation of the flow you are designing for.

STONE TOE, TYPICAL SECTION

NTS

A
X

STONE SPUR, TYPICAL SECTION

NTS

B
X

REUSE OF DOCUMENTS: THIS DOCUMENT AND ITS CONTENTS ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.